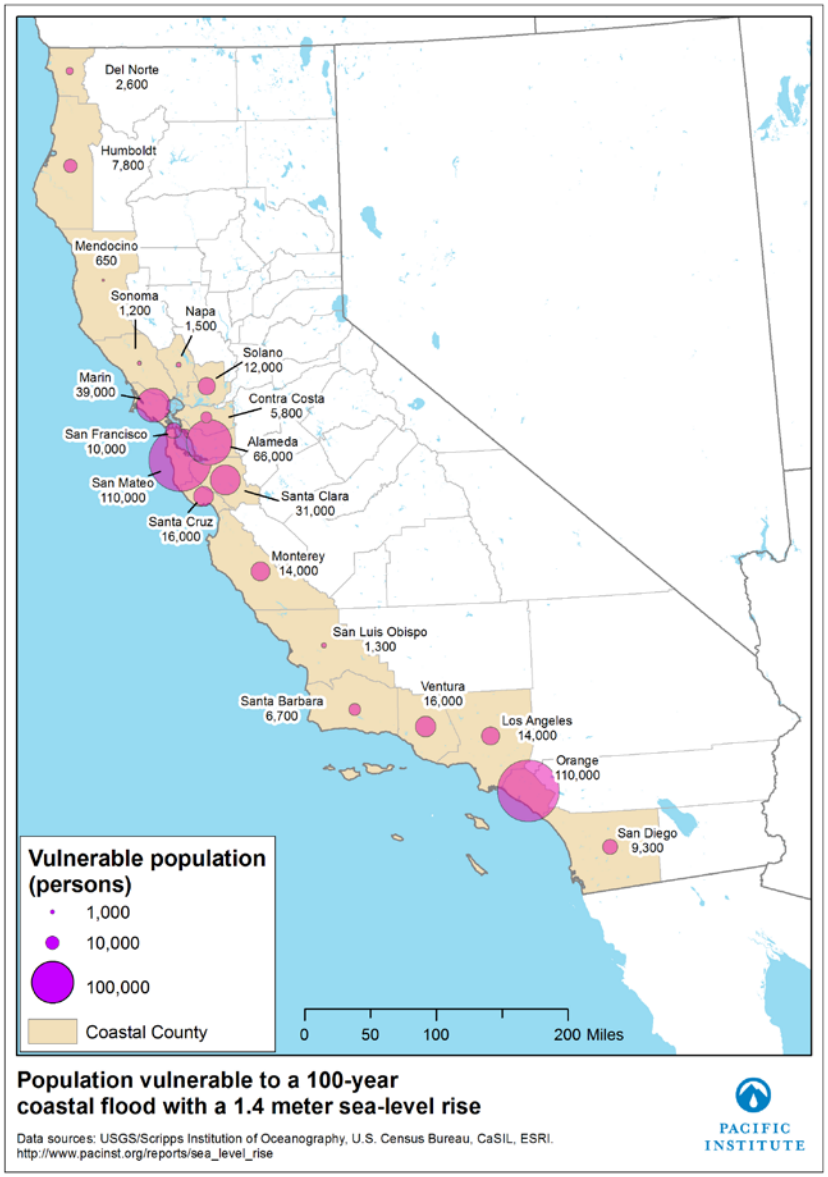
Safeguarding California: Preparing for Climate Risks

An Update to the 2009 Adaptation Strategy

Climate Change Impacts to Ocean and Coastal Resources

Ocean Protection Council



55 in sea-level rise + 100 year storm =

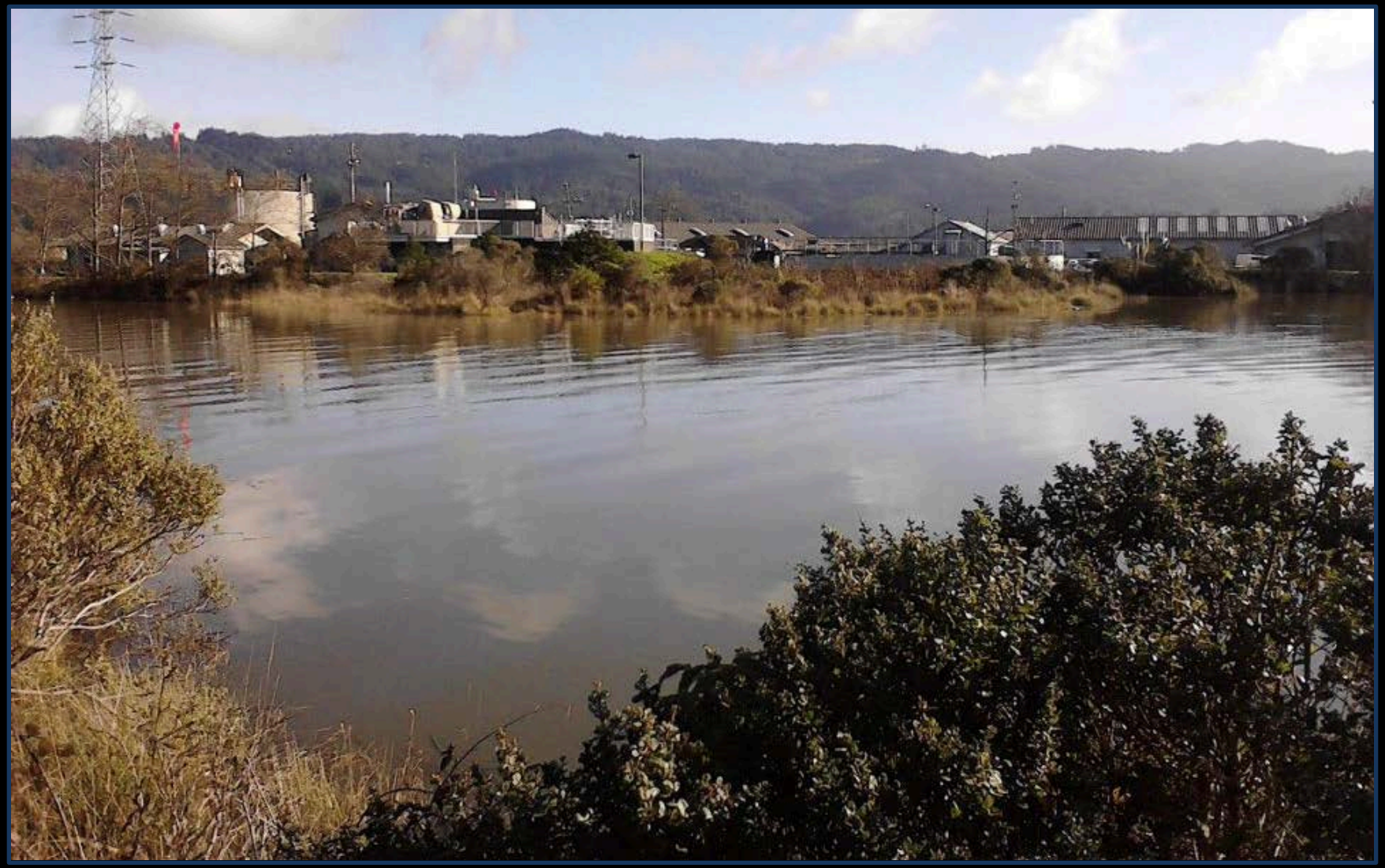
$100 billion in property at risk

480,000 people at risk


Photos Submitted by Volunteer Photographers to the California King Tides Initiative
www.californiakingtides.org
Flooded Bike Path, Sausalito
Photo Credit: secretivemarshbird

Wastewater Treatment Plant, Humboldt Bay, Arcata

Photo Credit: Kerry McNamee



Hoover Street Pump Station - Wastewater System, Eureka

Photo Credit: Drew Hyland

Albany Outfall

Photo Credit:Tom Mikkelsen

← Low Tide

High Tide →

Newport Island Bridge, Newport Beach

Photo Credit: http://daggle.com/king-tides-hit-newport-beach-3232

← Before High Tide

During High Tide →

Humboldt Bay Railroad along Hwy 101 north of Bracut

Photo Credit: Vanessa Vasquez

King Tides Encroaching on Homes, Pacifica

Photo Credit: Jack Sutton

Flooded Streets, South Imperial Beach

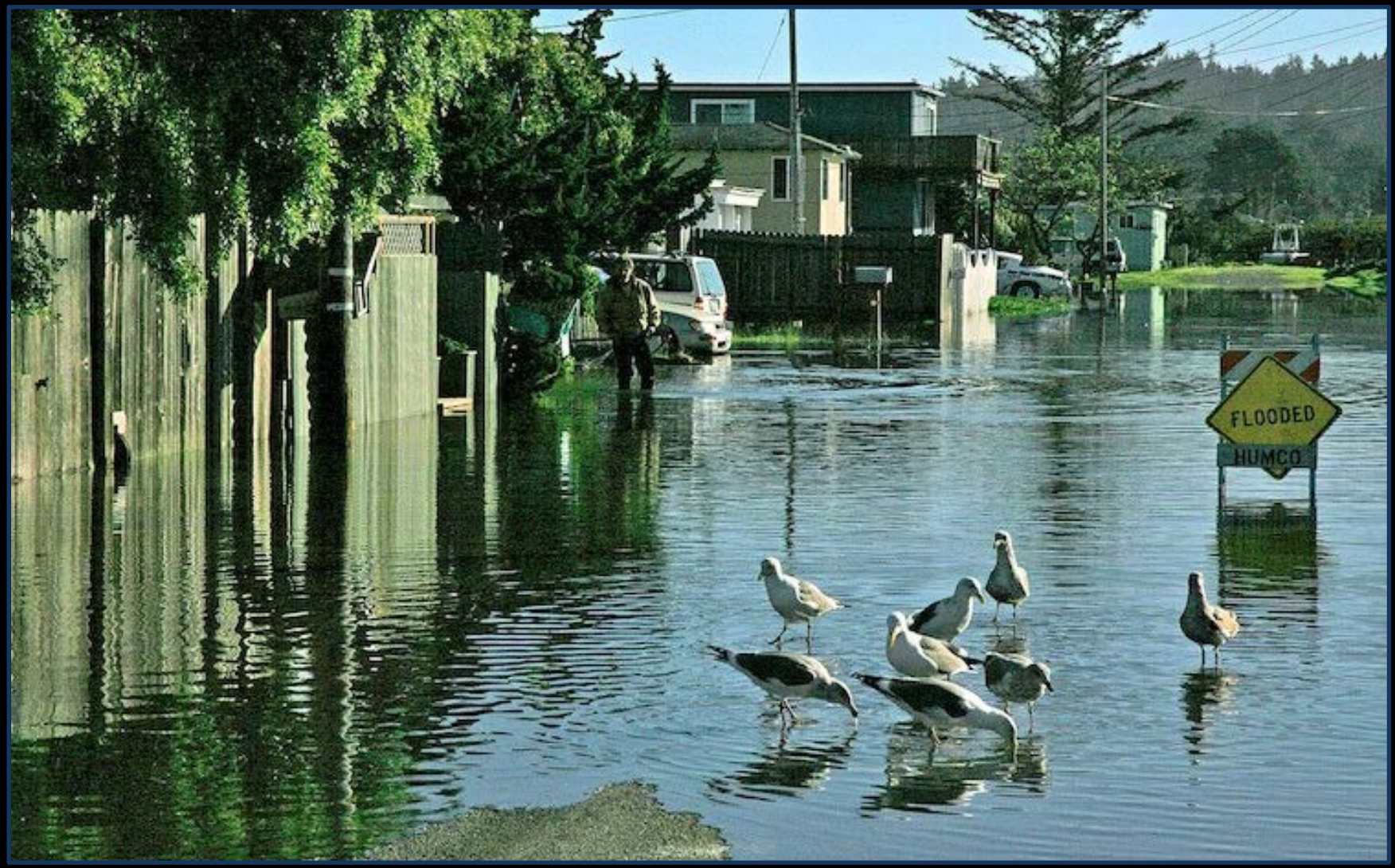
Photo Credit: TRNERR

Water Under Homes, Malibu

Photo Credit: LA Waterkeeper

Flooded Neighborhood, Perch Street, Humboldt Bay

by Humboldt Baykeeper



Flooded Streets, Mill Valley/Stinson Beach

Courtesy of Yanna B.

King Tides Overtopping Embarcadero, San Francisco

Photo Credit: Mike Filippoff


bcdc
San Francisco Bay
Conservation and Development Commission


OCEAN PROTECTION COUNCIL


DEPARTMENT OF
WATER RESOURCES


California Department of
Toxic Substances Control


CALIFORNIA
COASTAL
COMMISSION


Caltrans


CALIFORNIA
STATE PARKS
SINCE 1864


Coastal
Conservancy


California State Lands Commission

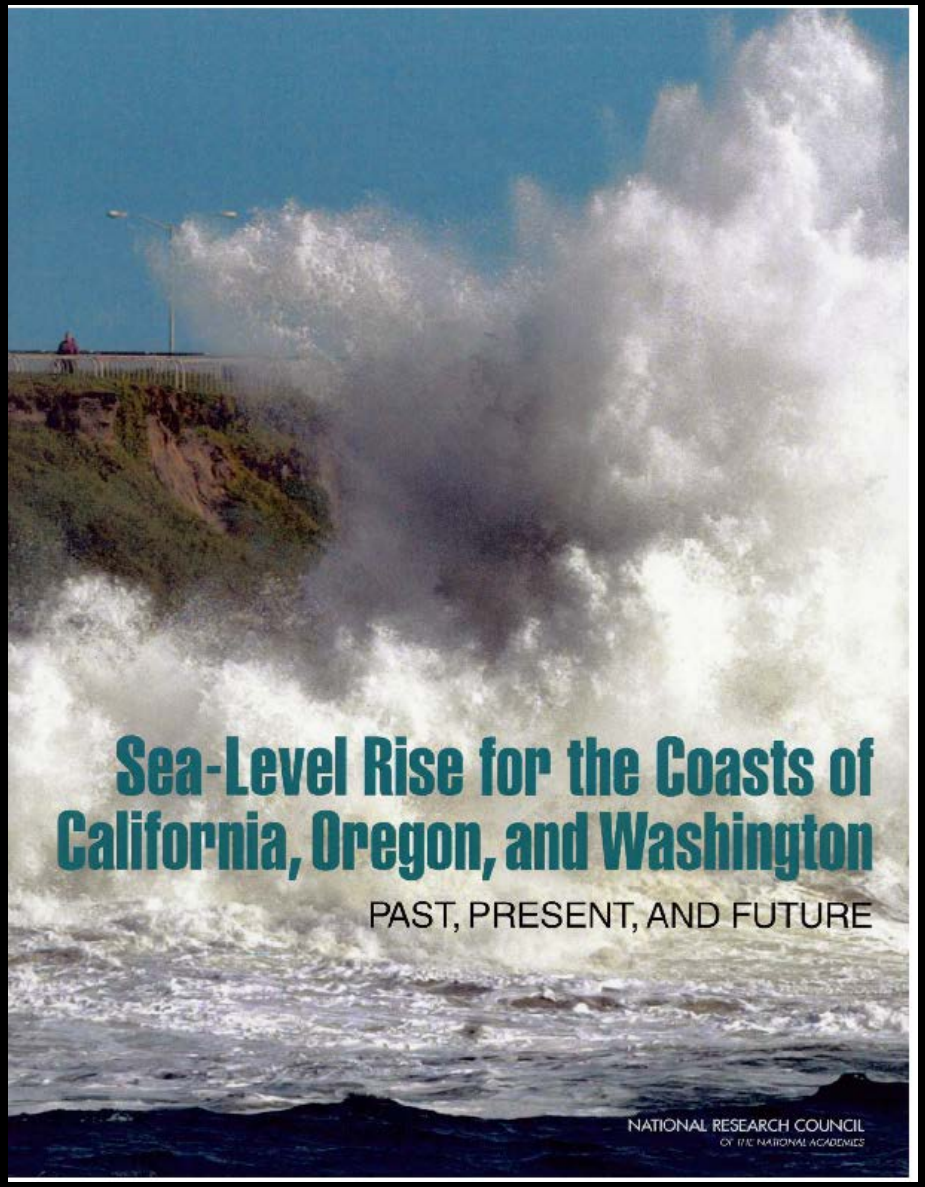

CALIFORNIA
natural
resources
AGENCY


DEPARTMENT OF
FISH AND GAME


The Governor's Office
of Planning and Research


California Department of
Public Health
CDPH


CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

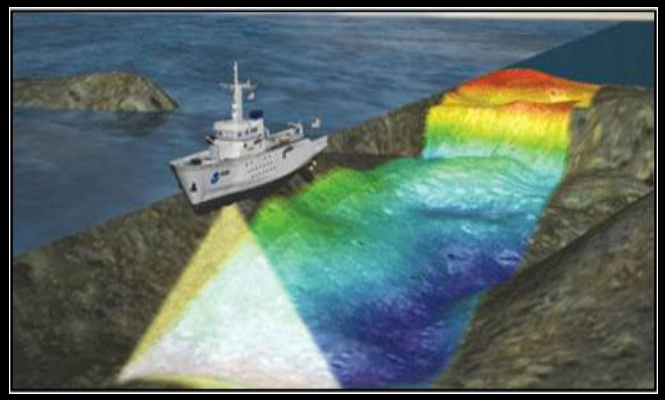

Sea-Level Rise for the Coasts of California, Oregon, and Washington
PAST, PRESENT, AND FUTURE
NATIONAL RESEARCH COUNCIL
OF THE NATIONAL ACADEMIES

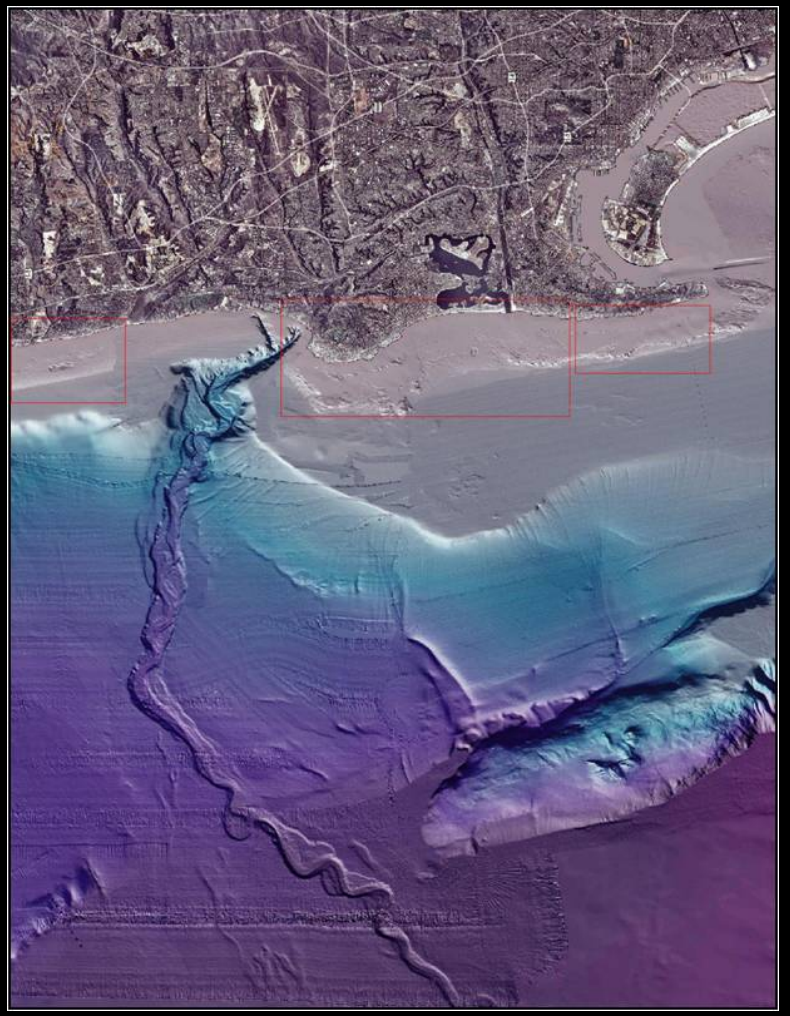
Projections in Updated Sea-Level Rise Guidance Document, March 2013

Time Period	North of Cape Mendocino *	South of Cape Mendocino
2000 – 2030	-4 cm to 23 cm (-1.6 in to 9 in)	4 cm to 30 cm (1.6 in to 11.8 in)
2000 – 2050	-3 cm to 48 cm (1.2 in to 19 in)	12 cm to 61 cm (4.7 in to 24 in)
2000 – 2100	10 cm to 143 cm (4 in to 56.3 in)	42 cm to 167 cm (16.5 in to 65.8 in)

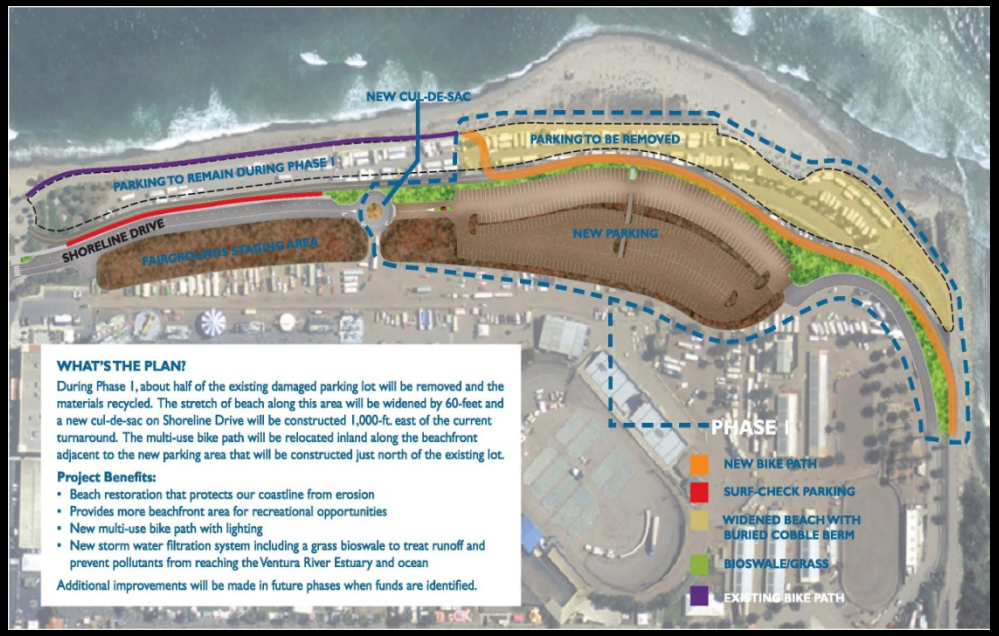
* The differences in sea level rise projections north and south of Cape Mendocino are due mainly to vertical land movement. North of Cape Mendocino, land is uplifting resulting in lower rise in sea level, relative to land.

CA Coastal Mapping Program





South Bay Salt Pond Restoration



http://www.surferspoint.org/

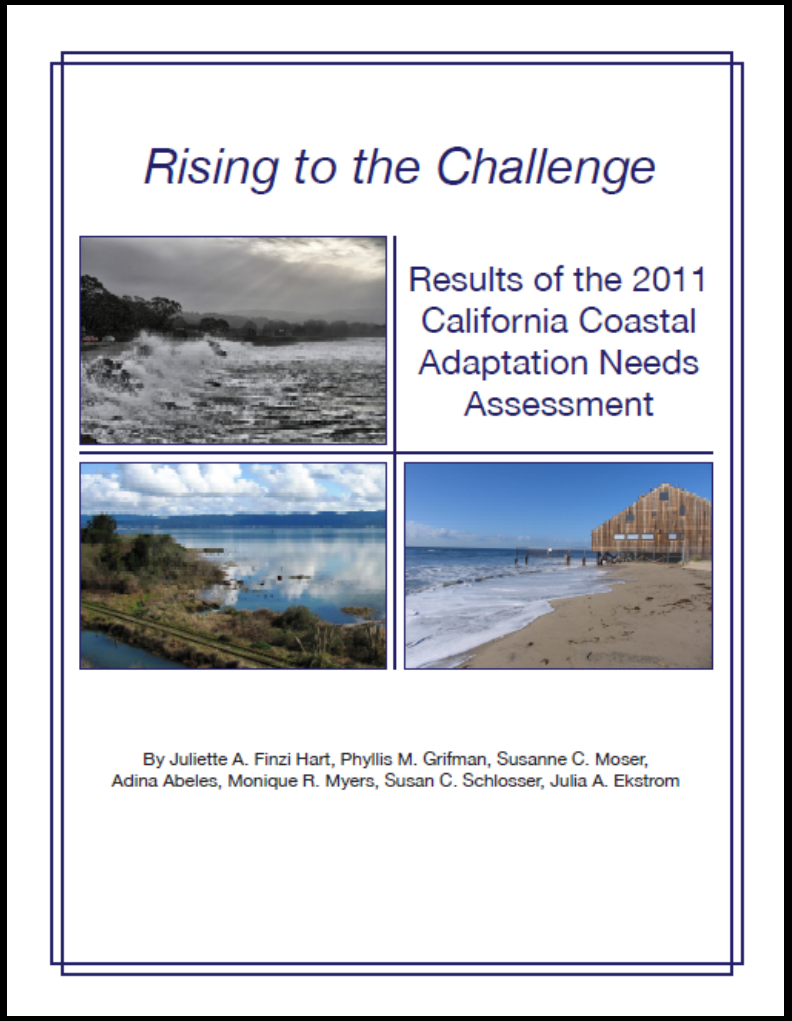
Managed retreat plan at Surfer's Point

http://www.adaptingtorisingtides.org/

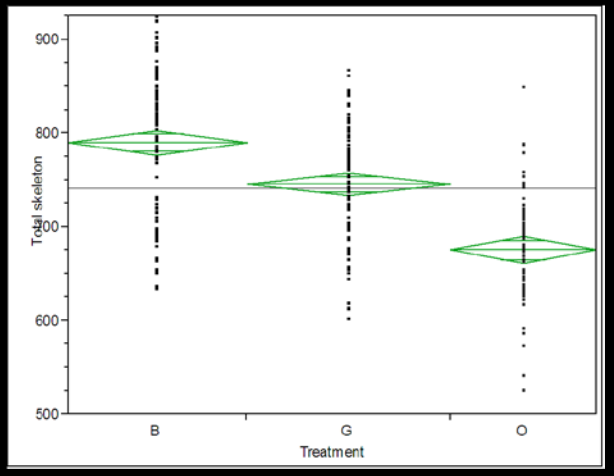
Adapting to Rising Tides (ART)

www.projectgroundswell.com

http://latimesblogs.latimes.com/



Ocean Acidification



Experiments of sea urchin growth decreasing under ocean acidification

mpa MONITORING ENTERPRISE

“Monitoring Climate Effects inTemperate Marine Ecosystems: A test-case using California’s Marine Protected Areas”